GEORGIA INSTITUTE OF TECHNOLOGY — OFFICE OF CONTRACT ADMINISTRATION

PROJECT ADMINISTRATION DATA SHEET

(Green card - misc.)

[x] ORIGINAL [ ] REVISION NO. _____

Project No. A-3200 DATE 4/13/82

Project Director: George Lee School/Lab EDL/IED

Sponsor: Beaufort Housing Authority, Beaufort, S.C.

Type Agreement: Letter of Authorization, dated 3/15/82

Award Period: From 3/12/82 To 4/30/82 (Performance) 4/30/82 (Reports)

Sponsor Amount: $3,000 Contracted through:

Cost Sharing: GTRI/XXX

Title: Community Noise Study for HUD Housing Project S. C. 26-6 Yemassee, South Carolina

ADMINISTRATIVE DATA

OCA Contact _____

1) Sponsor Technical Contact:

Edward L. Boyd
Executive Director
Beaufort Housing Authority
1009 Prince Street
P. O. Box 1104
Beaufort, S.C. 29902
Phone: (803) 524-2193

2) Sponsor Admin/Contractual Matters:

Edward L. Boyd
Executive Director
Beaufort Housing Authority
1009 Prince Street
P. O. Box 1104
Beaufort, S. C. 29902
Phone: (803) 524-2193

Defense Priority Rating: N/A

Security Classification: N/A

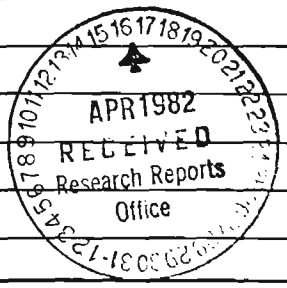
RESTRICTIONS

See Attached N/A Supplemental Information Sheet for Additional Requirements.

Travel: Foreign travel must have prior approval – Contact OCA in each case. Domestic travel requires sponsor approval where total will exceed greater of $500 or 125% of approved proposal budget category.

Equipment: Title vests with Sponsor; however, none proposed

COMMENTS:



COPIES TO:

Res. Admin. Network
Research Property Management
Accounting
Procurement/EES Supply Services
Research Security Services
~~Reports Coordinator (OCA)~~
Legal Services (OCA)
Library
EES Public Relations (2)
Computer Input
Project File
Other _____

FORM OCA 4:781

GEORGIA INSTITUTE OF TECHNOLOGY OFFICE OF CONTRACT ADMINISTRATION

SPONSORED PROJECT TERMINATION SHEET

Date 6/2/82

Project Title: Community NOise Study for HUD Housing Project S.C. 26-6 Yemassee, SC

Project No: A-3200

Project Director: George Lee

Sponsor: Beaufort Housing Authority, Beaufort, SC

Effective Termination Date: 4/30/82

Clearance of Accounting Charges: 4/30/82

Grant/Contract Closeout Actions Remaining:

- [x] Final Invoice ~~and Closing Documents~~
- [ ] Final Fiscal Report
- [ ] Final Report of Inventions
- [ ] Govt. Property Inventory & Related Certificate
- [ ] Classified Material Certificate
- [ ] Other _____

Assigned to: EDL (~~School~~/Laboratory)

COPIES TO:

Administrative Coordinator	Research Security Services	EES Public Relations (2)
Research Property Management	~~Reports Coordinator (OCA)~~	Computer Input
Accounting	Legal Services (OCA)	Project File
Procurement/EES Supply Services	Library	Other _____

FORM OCA 10:781

Project A-3200

COMMUNITY NOISE STUDY

for
HUD Housing Project S.C. 26-6
Yemassee, South Carolina

Prepared for the

Beaufort Housing Authority
Beaufort, South Carolina

By

George H. Lee, P.E.
Project Director

Central Georgia Area Office
Industrial Extension Division
Engineering Experiment Station
GEORGIA INSTITUTE OF TECHNOLOGY
April 8, 1982

TABLE OF CONTENTS

PURPOSE

The purpose of this noise assessment was to accurately measure typical existing day/night (DNL, LDN, or L_{dn}) sound levels at a site which has been proposed for a HUD Housing Project in Yemassee, South Carolina. Data was gathered to provide two twenty-four hour LDN levels.

BACKGROUND

The "day/night" noise level is a community noise descriptor which has come to be used quite often in quantifying community and environmental noise. It is essentially a twenty-four hour L_{eq} or equivalent level with levels occurring from 10:00 P.M. to 7:00 A.M. being counted as if they were 10 dBA greater than they actually are. Such a weighting is meant to penalize late night noise which occurs during usual sleeping hours.

The existing U. S. Housing and Urban Development regulations 24 CFR 51 have various requirements which specify permissible day/night levels. The regulations which apply in this case involve action levels of: a) less than 65 dBA; b) 65 to 75 dBA; and c) over 75 dBA.

The regulation also mentions that "loud and impulsive sounds" such as sonic booms or military testing should result in 8 dB being added to the site level results. No such sounds were evident at this site.

PERSONNEL

The following individuals assisted in this evaluation, either by providing initial information, equipment, computer time, or in other ways: (1) Ed

Boyd, Executive Director, Beaufort, SC Housing Authority; (2) Larry R. Edens, Georgia Tech Industrial Extension Division, Savannah, GA; (3) Pete Fischer, Engineering Coordinator, Tomberlin Associates, Architects, Inc.; (4) Harris T. Johnson, III, Georgia Tech Industrial Extension Division, Carrollton, GA; (5) George H. Lee, Georgia Tech Industrial Extension Division, Macon, GA; and (6) Bill Stoken, Environmental Officer, U. S. HUD, Columbia, SC.

MEASUREMENT LOCATION AND MICROPHONE PLACEMENT

Yemassee, South Carolina, is crisscrossed by two railroad tracks running approximately SE to NW and SW to NE approximately 90^{o} apart. Sidings exist in the downtown area, as well as radiused track between these lines enabling changes of direction. See town layout, page A2.

The site in question is located South of the NW to SE line between the track and SC Highway 3. See site layout, page A3.

Train traffic, both day and night, was considered to be the primary contributor to the levels in question. The "main" track (called Line 1) with the most traffic is the SW to NE line running by the Yemassee Amtrak Station.

Due to the orientation of the tracks, their traffic levels, and the orientation of the hoped-for housing itself, there was no obvious single location dictated for the microphone placement. It was decided to utilize a conservative placement which was as close to Line 1 as the planned "A" units would be and also as close to Line 2 (SE to NW) as the "B" units would be. Such a placement scaled to be approximately 139 ft. from Line 2 and 716 ft. from Line 1.

By overlaying existing topographical data and proposed site plan data, the above mentioned location was found to be very close to a 22" diameter

elm tree. This tree was taken as the nominal point of measurement, and as a landmark which facilitated locating the microphone properly.

The actual microphone location was at a point approximately 7 ft. directly East of the center of this 22" elm tree (which is slated to remain on-site). Thus, actual placement was approximately 725 ft. from Line 1, and 129 ft. from Line 2. See accompanying drawing, page A4.

A tripod was utilized to fix the microphone approximately 4'-6" above the ground. The microphone's center line was inclined 45^{o} to 70^{o} to the horizontal as recommended by the manufacturer for the best sensitivity. It was pointed toward Line 1.

On occasion a 0.5 mil plastic film was placed over the upper microphone and the 228 Sound Level Meter to protect them from scattered rain showers. This was necessary for a very short period during the last few hours of the first measurement day. Such a film has a minimal affect on accuracy, and then only at higher frequencies. Additionally, a plastic sheet was used to shield equipment from above in a lean-to fashion located about 2 ft. above the microphone. Only a very light rain fell for any period, as mentioned above, during measurements.

MEASUREMENT DAY SELECTION

Sometimes a quandry exists as to just which measurement days are the best ones to use in order to capture typical data. In this case, there seemed to be little difference. It was noted that Sunday and Monday each have at least one less train scheduled. See pages A5 thru A11.

It should be noted that even though schedules often indicate what the train traffic should be, there are in reality, probably no two days just

alike. Also, different classes of trains, it has been discovered, have different priorities and are perhaps allowed to vary from printed schedules to different degrees. This pertains primarily to freight traffic, rather than more prompt Amtrak trains.

The measurement days of this study involve Tuesday, Wednesday, and Thursday, so as much as possible, "typical" days were planned for and measured. Measurements were made during the following two twenty-four hour periods:

(1) Day 1 - 11:25 AM, March 23, 1982, to
11:26 AM, March 24, 1982.
(2) Day 2 - 11:26 AM, March 24, 1982, to
11:26 AM, March 25, 1982.

EQUIPMENT AND METHODS USED

Primary data was taken with the Quest Electronics Model 142-228-12T Equivalent Sound Level Recorder System. Specific equipment used was the Model 228 Integrating Sound Level Meter, Serial No. Z0010002; Model 142 Graphic Level Record, Serial No. C001889; and the Model CA-12 Sound Calibrator, Serial No. U0010040. Measurement accuracy of this system is ±1.0 dBA over its temperature range of -10^{o} C to $+50^{o}$ C. Outside temperature was within these limits during the tests and the equipment was satisfactorily calibrated at all times.

This system is specifically intended for the measurement of community noise levels when such noise descriptors as L_{dn} or L_{eq} are required. Samples are made continuously and integrated to yield equivalent levels corresponding to selectable measurement sub-intervals. In this case, in order to achieve reasonable resolution of the noise history, a four minute

sub-interval was chosen. This yielded 360 sub-intervals per twenty-four hour period.

The dynamic range setting of the Sound level Meter used was 40 to 80 dBA. It operated in the fast time-averaging mode as required by the HUD regulations appendix to Subpart B.

A cross-check of the above measurement system was made with a Bruel & Kjaer 2209 Type I Impulse Precision Sound Level Meter, Serial No. 594740; recorded to a B & K Type 2306 Graphic Level Recorder, Serial No. 616003, calibrated with a B & K Type 4220 Pistonphone, Serial No. 577874. Quest four minute sub-interval L_{eq} levels of 54.8 and 56.0 dBA were correspondingly calculated from samples from the B & K recorder tape output. These calculations yielded 56.4 and 57.5 dBA respectively for good correlation of the two systems, considering data variation and use of a 3.3 second sampling.

Occasional late night levels less than 40 dBA probably occurred, but they are entered into data reduction as 40 dBA. Occasional excursions to the low 40's indicate that the ambient level is somewhere in the 30's, probably the high to middle 30's. Any difference between actual and 40 dBA levels are truly of minimum consequence, when considering the type of logarithmic additions which followed to arrive at the L_{dn} level.

Data levels for the brief periods of time during which calibration checks were made were estimated, usually with the levels existing either just prior to, or just following the check. All calibration checks or other interruptions such as to change paper, were made during relatively quiet periods of time, i.e. no trains. All train related noise is included in calculations.

The Model 228 was powered with a 9-Volt battery eliminator. The Model 142 was powered from a City power pole approximately 100 ft. away from the measurement spot. Battery operation was possible, however, if it had been

required.

Recommended windscreens were in place at all times.

Recorded data was manually read, recorded, and totaled. It was then inputted to a Tektronix Model OPT1 Computer, Serial No. B021085 (also Bruel & Kjaer Model 183, Serial No. 106).

RESULTS

Data from Day 1 yielded an L_{dn} of 64.4 dBA.

Data from Day 2 yielded an L_{dn} of 60.3 dBA.

The L_{dn} community noise descriptor is, by definition, a twenty-four hour descriptor; however, when Day 1 and Day 2 data is all considered together, as if double the number of data points were taken in a twenty-four hour period, the resulting level is 62.9 dBA.

Raw data from the Graphic Level Recorder was estimated to the nearest 0.2 dBA, i.e., .0, .2, .4, or .8 dBA. For the purposes of simplyfying the presentation in this report these levels were rounded to the nearest 0.5 dBA, i.e., levels estimated at X.8, X.0, or X.2 are shown as X.0, while levels estimated at X.4, or X.6 are shown as X.5 levels. See pages A12 thru A19.

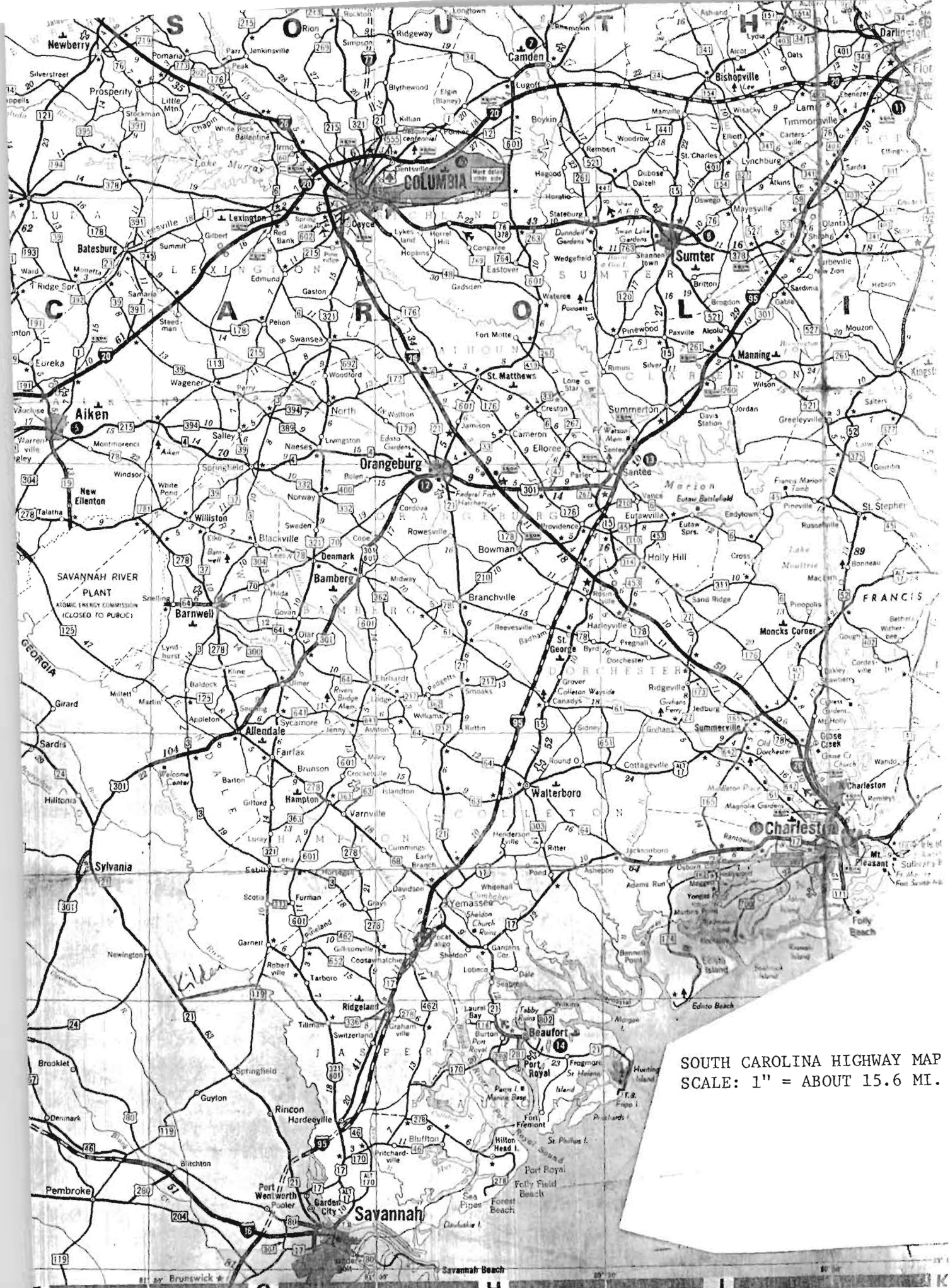
Computer data tape copies are presented on pages A20 thru A23. Poor copy is because the printing was in blue.

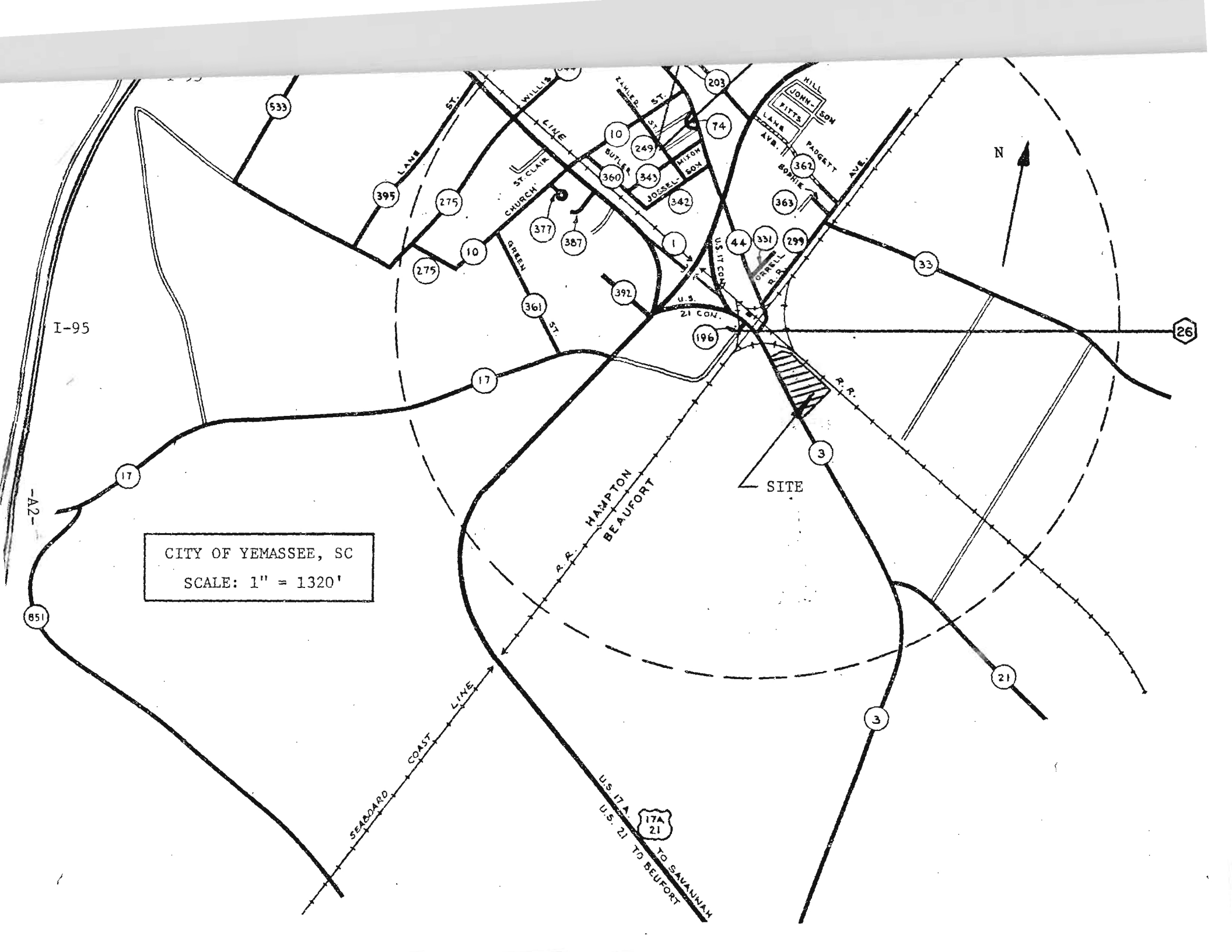
COMMENTS

It was not the intent of this study to draw conclusions from the data, but rather to try to measure as accurately as possible the L_{dn} levels found to exist on measurement days which were thought to be as typical as possible of the noise environment at the site under consideration.

Relative source contributions are subjectedly considered to be following, ranked in their order of contribution to the L_{dn} level: (1) night trains; (2) day trains; (3) day other; and (4) night other. "Other" here primarily means automobile or truck traffic.

APPENDICES


SOUTH CAROLINA
COLUMBIA
Aiken
Orangeburg
Sumter
Manning
Walterboro
Charleston
Beaufort
Savannah
Allendale
Barnwell
Bamberg
Denmark
Williston
New Ellenton
Lexington
Batesburg
Newberry
Camden
Bishopville
Darlington
Florence
Moncks Corner
Summerville
Santee
Georgetown
Hilton Head I.
Port Royal
Ridgeland
Hampton
Sylvania
Pembroke
Brooklet
Rincon
Hardeeville
Bluffton
Savannah Beach
SAVANNAH RIVER PLANT
ATOMIC ENERGY COMMISSION
(CLOSED TO PUBLIC)
GEORGIA
Lake Murray
Lake Marion
Lake Moultrie
SOUTH CAROLINA HIGHWAY MAP
SCALE: 1" = ABOUT 15.6 MI.

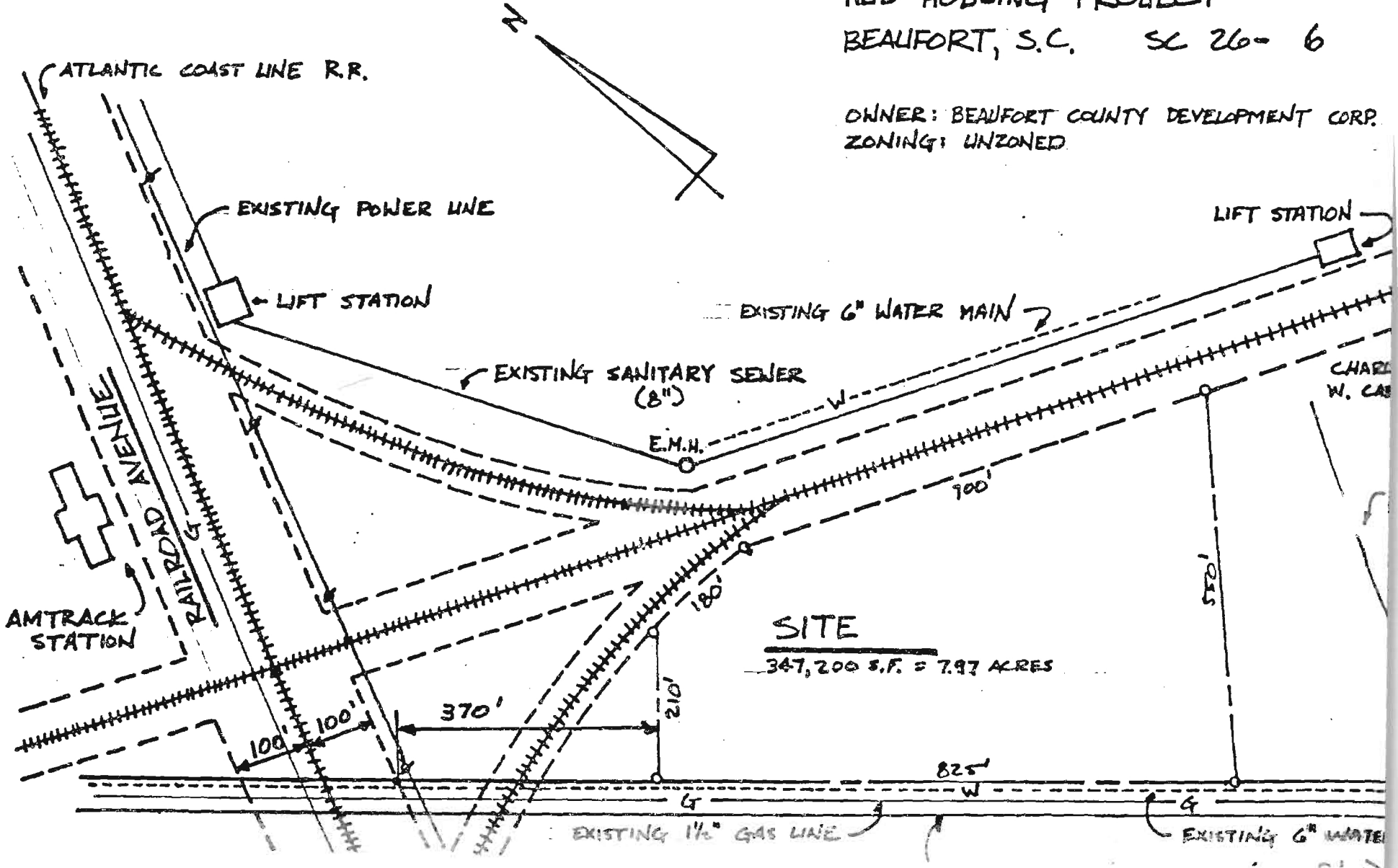

I-95
-A2-
CITY OF YEMASSEE, SC
SCALE: 1" = 1320'
SITE
N
HAMPTON BEAUFORT R.R.
SEABOARD COAST LINE
U.S. 17A
U.S. 21 TO BEAUFORT
TO SAVANNAH
U.S. 17 CONN.
ORRELL R.R.
R.R.
LANE ST.
WILLIS LINE
ST. CLAIR CHURCH
GREEN ST.
BUTLER
JOSSEL
MIXON SON
FAHLER ST.
HILL
JOHN-PITTS-SON
LANE AVE.
PAGGETT AVE.
BOSKIE
533
395
275
10
249
74
203
360
343
342
362
363
377
387
1
44
331
299
33
26
392
361
196
17
3
21
851

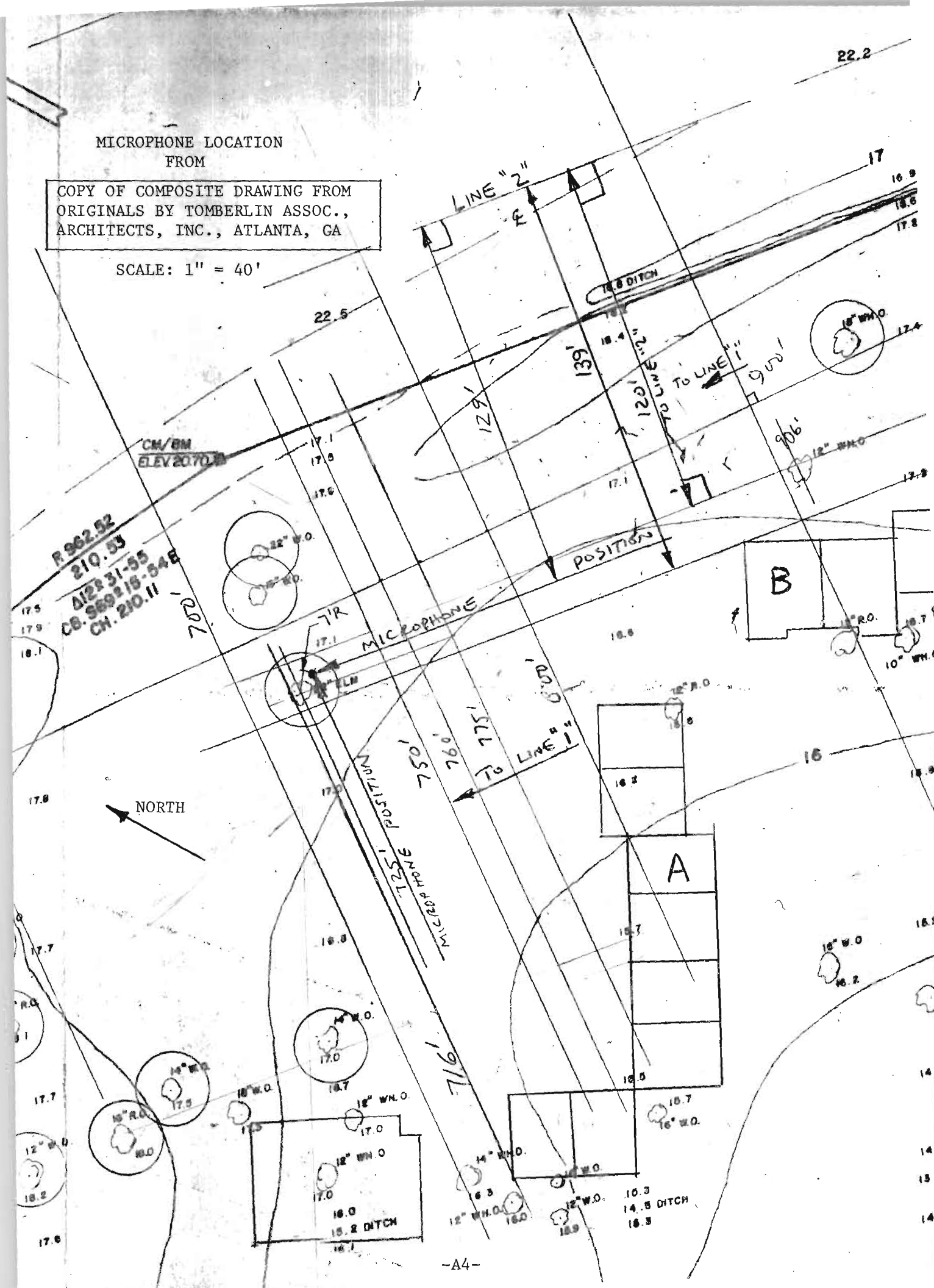
SITE PLAN

SCALE: 1" = 200'

HUD HOUSING PROJECT
BEAUFORT, S.C. SC 26- 6

OWNER: BEAUFORT COUNTY DEVELOPMENT CORP.
ZONING: UNZONED




MICROPHONE LOCATION
FROM
COPY OF COMPOSITE DRAWING FROM ORIGINALS BY TOMBERLIN ASSOC., ARCHITECTS, INC., ATLANTA, GA
SCALE: 1" = 40'
LINE "2"
LINE "1"
POSITION
MICROPHONE
NORTH
A
B
CM/BM
ELEV 20.70
R 962.52
210.55
Δ12° 31-55
CB. S69° 15-54 E
CH. 210.11
716'
775'
760'
950'
906'
129'
139'
120'
22.2
22.5
17
16
15
14
18.8 DITCH
15.2 DITCH
14.5 DITCH

INDEX

Safety First

SEABOARD COAST LINE RAILROAD

FLORENCE DIVISION

AND

CN&L RAILROAD

TIME TABLE No. 5

IN EFFECT

Sunday, October 25, 1981

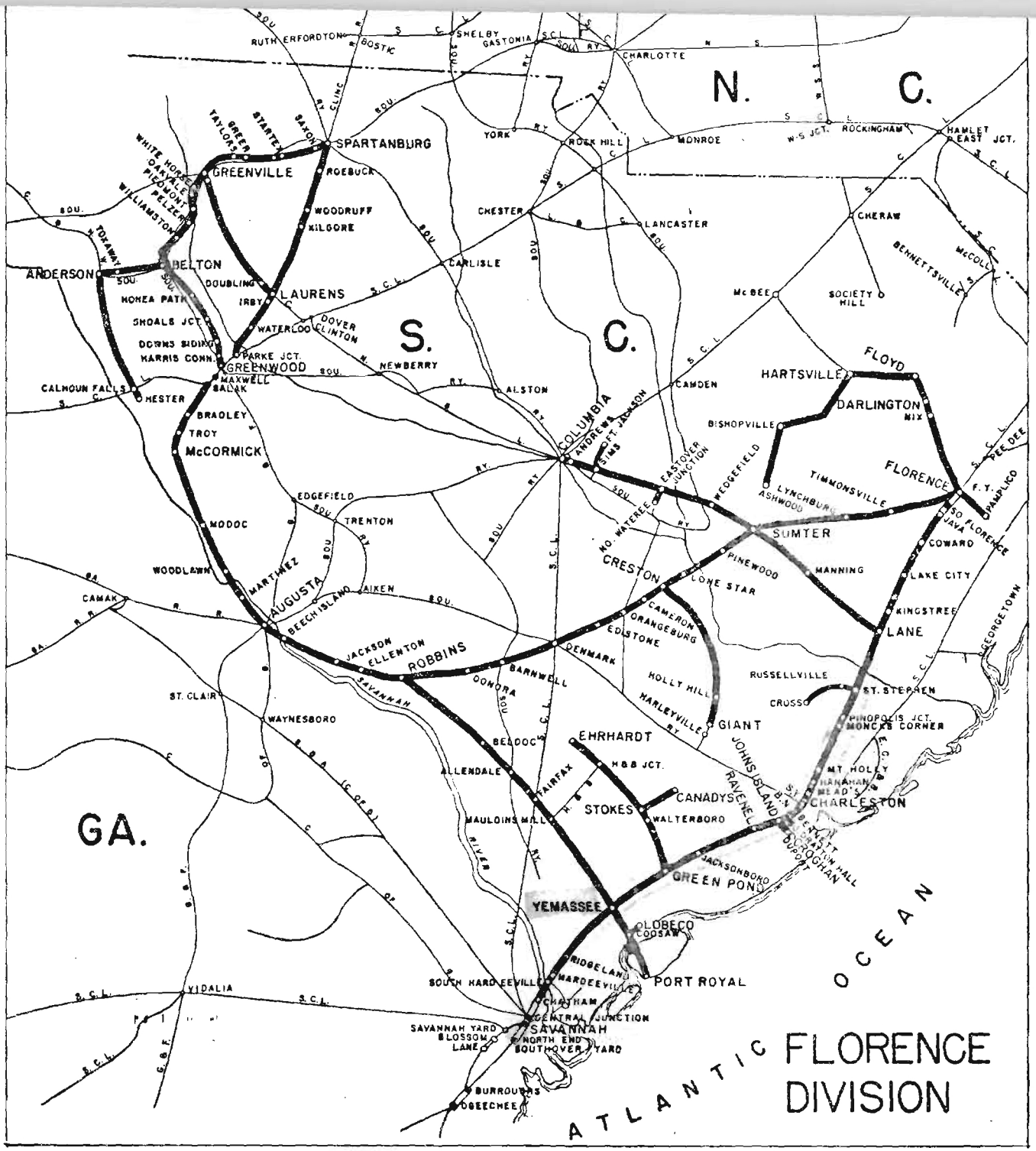
At 12:01 A.M.

SUPERSEDING TIME TABLE NO. 4
DATED April 26, 1981

EASTERN STANDARD TIME

FOR THE GOVERNMENT OF EMPLOYEES ONLY

A. C. JONES, JR., Vice President-Operations
J. H. ARNOLD, Assistant Vice President-Operations
M. L. WADSWORTH, General Manager-Transportation
G. M. McNEILL, Superintendent


N. C.
S. C.
GA.
ATLANTIC OCEAN
FLORENCE DIVISION
SPARTANBURG
GREENVILLE
ANDERSON
BELTON
LAURENS
GREENWOOD
McCORMICK
CALHOUN FALLS
HESTER
BRADLEY
TROY
MODOC
EDGEFIELD
TRENTON
WOODLAWN
AUGUSTA
CAMAK
BEECH ISLAND
AIKEN
ST. CLAIR
WAYNESBORO
ROBBINS
JACKSON
ELLENTON
SAVANNAH
BELDOC
ALLENDALE
MAULDINS MILL
YEMASSEE
SOUTH HARDEEVILLE
VIDALIA
SAVANNAH
SAVANNAH YARD
BLOSSOM LANE
NORTH END
SOUTHOVER YARD
CENTRAL JUNCTION
CHATHAM
HARDEEVILLE
RIDGELAND
BURROUGHS
OGEECHEE
OLOBECO
COOSAW
PORT ROYAL
GREEN POND
JACKSONBORO
WALTERBORO
STOKES
CANADYS
EHRHARDT
H&B JCT.
FAIRFAX
BARNWELL
DENMARK
ORANGEBURG
CAMERON
EDISTO
HOLLY HILL
HARLEYVILLE
GIANT
CRESTON
PINEWOOD
LONE STAR
SUMTER
MANNING
COLUMBIA
ANDREWS
FT. JACKSON
EASTOVER JUNCTION
NO. WATEREE
WEDGEFIELD
CAMDEN
ALSTON
NEWBERRY
CHESTER
LANCASTER
CHERAW
YORK
ROCK HILL
MONROE
ROCKINGHAM
HAMLET
HAMLET EAST JCT.
CHARLOTTE
SHELBY
GASTONIA
RUTHERFORDTON
BOSTIC
CLINCHFIELD
SAXON
STARTEX
GREER
TAYLORS
WHITE HORSE
OAKVALE
PIEDMONT
PELZER
WILLIAMSTON
TOWAWAY
HONEA PATH
SHOALS JCT.
DOWNS SIDING
HARRIS CONN.
PARKE JCT.
MAXWELL
BALAK
DOUBLING
IRBY
WATERLOO
DOVER
CLINTON
CARLISLE
WOODRUFF
KILGORE
ROEBUCK
BISHOPVILLE
HARTSVILLE
FLOYD
DARLINGTON
MIX
FLORENCE
TIMMONSVILLE
LYNCHBURG
ASHWOOD
F.Y.
PAMPLICO
SO. FLORENCE
SO. JAVA
COWARD
LAKE CITY
KINGSTREE
LANE
GEORGETOWN
McBEE
SOCIETY HILL
BENNETTSVILLE
McCOLL
CHERAW
RUSSELLVILLE
CROSS
ST. STEPHEN
PINOPOLIS JCT.
MONCKS CORNER
MT. HOLLY
HANAHAN
MEAD'S
CHARLESTON
JOHNS ISLAND
RAVENEL
BENNETT
HUGER
DUPONT
CORDESVILLE
DORCHESTER
SUMMERVILLE
B&A
S.C.L.
SOU.
A.C.L.
C.&W.C.
G.F.&P.
N.&W.
W.S.JCT.
S.A.L.
R.F.&P.
C.&O.
N.C.&St.L.
R.&D.
(C.&E.R.)

575	557	581	591	107	197	109	89	175	87	Station Numbers	Actual Field M. P. Locations	TIME TABLE NO. 5 IN EFFECT October 25, 1981 — STATIONS
Local Freight	Local Freight	Local Freight	Local Freight	Through Freight	Through Freight	Through Freight	Palmetto	Piggyback Special	Silver Meteor-Champion			
Ex. Sun.	Ex. Sun.	Ex. Sun.	Daily	Daily	Daily	Daily	Daily	Ex. Mon.	Daily			
A.M.	A.M.	A.M.	A.M.	P.M.	P.M.	P.M.	P.M.	P.M.	A.M.			
		600		1030	1000	930	713	345	326	A293	292.7	2 Tracks — T FLORENCE ®
										A296	296.3	3.6 SOUTH FLORENCE
										A300	300.0	3.7 JAVA
										A309	309.4	9.4 COWARD
										A316	316.1	6.7 LAKE CITY ®
							s 743			A331	331.1	14.5 KINGSTREE
	L 630			1129	1101	1030		435		A342	341.4	10.3 LANE ®
L1000										A349	349.1	7.7 CROSS JCT.
		A 900								A350	349.6	0.5 ST. STEPHEN
										A365	365.0	15.4 MONCKS CORNER®
										A376	376.1	2 Tracks — 11.1 MT. HOLLY
										A384	383.3	7.2 HANAHAN
										A386	386.3	3.0 MEADS X-SOU
							s 833		s 456	A388	387.7	1.4 CHARLESTON
				1230	1159	1130		525		A389	388.4	0.7 T S Y ® X-SOU
A1215	A 800		L1201							A390	389.3	0.9 BENNETT
										A392	392.0	0.9 B N
										A394	394.8	2.8 SO. DRAYTON HALL
										A399	398.7	3.9 JOHNS ISLAND
										A407	406.7	8.0 RAVENEL
										A419	419.2	12.5 JACKSONBORO
										A429	428.7	9.5 GREEN POND
			300	130	300	1235	s 918	615	s 546	A443	443.0	14.3 YEMASSEE® X-SCL
										A459	459.3	16.3 RIDGELAND
										A474	473.9	2 Tracks — 14.6 HARDEEVILLE ®
										A481	480.8	6.9 CHATHAM
										A490	490.4	9.6 CENTRAL JCT. X-CGA
			500	330	700	220	s1015	745	s 646	A491 S500	A490.9 S498.0	0.5 A T SAVANNAH® X-SCL
P.M.	A.M.	A.M.	A.M.	A.M.	A.M.	A.M.	P.M.	P.M.	A.M.			
Ex. Sun.	Ex. Sun.	Ex. Sun.	Daily	Daily	Daily	Daily	Daily	Ex. Mon	Daily			
575	557	581	591	107	197	109	89	175	87			195.9 Miles Florence to Savannah

TIME TABLE NO. 5 IN EFFECT October 25, 1981 STATIONS	Station Numbers	FIRST CLASS			SECOND CLASS			THIRD CLASS			
		90	176	88	120	190	110	558	592	576	580
		Palmetto	Piggyback Special	Silver Meteor-Champion	Through Freight	Through Freight	Through Freight	Local Freight	Local Freight	Local Freight	Local Freight
		Daily	Daily	Daily	Daily	Daily	Daily	Ex. Sun.	Daily	Ex. Sun.	Ex. Sun.
		A.M.	P.M.	P.M.	P.M.	A.M.	A.M.	A.M.	A.M.	A.M.	P.M.
2 Tracks	T FLORENCE ® A	YARD O Y	s1055	730	s1042	130	400	530				100
	3.6 SOUTH FLORENCE	12										
	3.7 JAVA											
	9.4 COWARD	Sig. S. 7										
	6.7 LAKE CITY ®	Sig. S. 90										
	14.6 KINGSTREE	Sig. S. 49	s 953									
	10.3 LANE ®	Sig. S. 56 Y		620		1025	220	350	A 130			
	7.7 CROSS JCT.										A 730	
	0.5 ST. STEPHEN	Sig. S. 76										L1000
	15.4 MONCKS CORNER ®	Sig. S. 77										
2 Tracks	11.1 MT. HOLLY	Sig. S. 24										
	7.2 HANAHAN											
	3.0 MEADS X-SOU											
	1.4 CHARLESTON		s 904		s 857							
	0.7 T SY ® X-SOU	Y		520		915	120	250				
	0.9 BENNETT	10726' 195P YARD O Y							L1201	A 500	L 600	
	0.9 B N											
	2.8 SO. DRAYTON HALL											
	3.9 JOHNS ISLAND	140										
	8.0 RAVENEL	Sig. S. 65										
	12.5 JACKSONBORO	Sig. S.										
	9.5 ® GREEN POND	Sig. S. YARD Y										
	14.3 YEMASSEE ® X-SCL	Sig. S. 7881' 143P YARD Y	s 816	430	s 807	800	1140	110		300		
	16.3 RIDGELAND	Sig. S. 12										
2 Tracks	14.6 HARDEEVILLE ®	Sig. S. 221										
	6.9 CHATHAM											
	9.6 CENTRAL JCT. X-CGA											
	0.5 T SAVANNAH X-SCL ® L	YARD O Y	735	330	721	630	1000	1130		1201		
		A.M.	P.M.	P.M.	A.M.	P.M.	P.M.	A.M.	A.M.	A.M.	A.M.
195.9 Miles Florence to Savannah		Daily	Daily	Daily	Daily	Daily	Daily	Ex. Sun.	Daily	Ex. Sun.	Ex. Sun.
		90	176	88	120	190	110	558	592	576	580

Station Numbers	Actual Field M. P. Locations	TIME TABLE NO. 5 IN EFFECT October 25, 1981 — STATIONS	Scales, Wyes, Car Capacity
A429	429.0	L GREEN POND A	YARD Y
		11.9	
AMF441	440.9	T WALTERBORO	36 Y
		5.7	
AMF447	446.6	STOKES	7 Y
		14.2	
AMF461	460.8	H. & B. JCT.	57
		6.1	
AMF467	466.9	A EHRHARDT L	50
		37.9 Miles Green Pond to Ehrhardt	

Station Numbers	Actual Field M. P. Locations	TIME TABLE NO. 5 IN EFFECT October 25, 1981 — STATIONS	Scales, Wyes, Car Capacity
		Westward	Eastward
AMJ468	468.1	L PORT ROYAL A	YARD
		4.3	
AMJ464	463.8	BEAUFORT	19
		9.9	
AMJ454	453.9	COOSAW	SPUR
		10.6	
A443	443.3	T A YEMASSEE X-SCL ® L	YARD Y
		24.8 Miles Port Royal to Yemassee	

WESTWARD — ROBBINS SUBDIVISION — EASTWARD

SECOND CLASS			Station Numbers	Actual Field M. P. Locations	TIME TABLE NO. 5 IN EFFECT October 25, 1981 — STATIONS	Scales, Wyes, Car Capacity	SECOND CLASS		Third Class
327	515	397					328	392	516
Through Freight	Local Freight	Through Freight					Through Freight	Through Freight	Local Freight
Daily	Ex. Sun.	Daily					Daily	Daily	Ex. Sat.
P.M.	A.M.	A.M.					P.M.	P.M.	P.M.
	830		A443	443.3	L T YEMASSEE ® A X-SCL	YARD Y			315
					19.3 ®				
	910		AMH463	462.6	MAULDINS MILL	2633' 47P 11			230
					9.3				
L 900	940	L 130	S436	471.9	FAIRFAX X-SCL	2359' 42P 13	A 800	A1100	210
					5.4				
910	950	140	AMH477	477.3	ALLENDALE X-SOU	2318' 42P 31	745	1040	150
					8.3 ®				
920	1005	150	AMH486	485.6	BELDOC	5803' 105P	730	1010	135
					15.6				
950392	1040	210	AK431	501.2	T A ROBBINS ® L	9081' 165P 9 Y	650	950327	105
P.M.	A.M.	A.M.					P.M.	P.M.	P.M.
Daily	Ex. Sun.	Daily			58.7 Miles Yemassee to Robbins		Daily	Daily	Ex. Sat.
327	515	397					328	392	516

	Line Capacity (Lbs.) 4-Axle Cars	Instructions or Train Order, Authorized Maximum Speed Of Trains in M.P.H. is:				Cars weighing				Engines in series			Wrecker Nos.		Cranes
		Psgr. trains handled by psgr. type engines	Piggy-back Trains	Unrestricted Trains 107, 109, 175, 176	Restricted Trains Are All Others	220,001 to 240,000 Lbs.	240,001 to 251,000 Lbs.	251,001 to 263,000 Lbs.	263,001 to 270,000 Lbs.	250-261, 300-392, 556-559, 700, 800, 900, 1000, 4600, 4700	500-555, 1300, 1400, 1500, 1600, 1700, 1800, 3200, 3400, 4000, 4200, 5100, 5500, 6000	1900, 2000, 2100, 7000, 8000, 8100	765250 765251 765252 771200 771201 771202 771203 771253 771254 771255 771256 771257 L & N 40022	765157 765160 L&N 40029 40030 Ga. 1901 A&WP 2 See Note A	765447 765449 765452 765454 765455 765458 765459 765460 765463 771929 771947 771948 771995 771997
CHARLESTON SUBDIVISION															
Florence to MP 490.2	270,000	79	70	60	50								35	35	25
Bridge MP 345.3 to 347.9		40	30	30	30										
Bridge MP 361.7 to 361.8		50	50	50	50										
Bridge MP 393.6 to 393.7		50	50	50	50										
Bridge MP 400.1 to 400.2		79	70	60	50										
Bridge MP 425.1 to 425.2		79	70	60	50										
Bridge MP 478.2 to 480.1		30	30	30	30										
Johns Island to Croghan	270,000				10			7	7		BARRED	7	7	BARRED	
BURROUGHS SUBDIVISION															
Savannah Terminal—East Route:															
Central Jct. to MP 495.0	270,000	50	50	50	50								35	35	25
MP 495.0 to MP 497.4	270,000	70	70	60	50								35	35	25
MP 497.4 to MP 503.1	270,000	79	70	60	50								35	35	25
Savannah Terminal—West Route:															
MP 499.9 to Burroughs	270,000	40	40	40	40										25
Burroughs to Ogeechee	270,000	79	70	60	50								35	35	25
Bridge MP 505.5 to 505.7		79	60	60	50										
PAMPLICO SUBDIVISION															
Florence to Pamplico	263,000				25	15	15	15	BARRED	15	BARRED	BARRED	15	15	15
CROSS SUBDIVISION															
Cross Jct. to Russellville	270,000				15										
Russellville to Cross	270,000				40								30	30	25
CHARLESTON TERMINAL															
North Charleston Term. Co. Lead	270,000				15						BARRED				
Ashley River Spur	270,000				15										
WALTERBORO SUBDIVISION															
Green Pond to MP 461.0	270,000				30								25	25	25
MP 461.0 to Ehrhardt	270,000				25										
Stokes to Canadys	270,000				30								25	25	25
AUGUSTA SUBDIVISION															
Florence to Augusta	270,000				49								35	35	25
Bridge MP 353.2 to 354.6					49										
Bridge MP 456.0 to 456.8					15				10			10	10		
SPARTANBURG SUBDIVISION															
Augusta to Spartanburg	270,000				49								35	35	25
Bridge MP 461.9 to 462.0					20			15	10			10	10	15	
Bridge MP 537.0 to 537.2					25		20	15	10				10	15	
Bridge MP 581.2 to 581.3					25	20	15	10	10			10	10	15	
PIEDMONT SUBDIVISION															
Greenwood to Spartanburg	270,000				40								30	30	25
Uptown Lead — Greenville	251,000				15			BARRED	BARRED			BARRED	BARRED	BARRED	
BELTON SUBDIVISION															
Belton to Anderson	240,000				25		BARRED	BARRED	BARRED			BARRED	BARRED	BARRED	20
Bridge MP 4.8 to 4.9				10		BARRED	BARRED	BARRED			BARRED	BARRED			
Bridge MP 5.4 to 5.5					10		BARRED	BARRED	BARRED			BARRED	BARRED		
Bridge MP 7.9 to 8.0					10		BARRED	BARRED	BARRED			BARRED	BARRED		

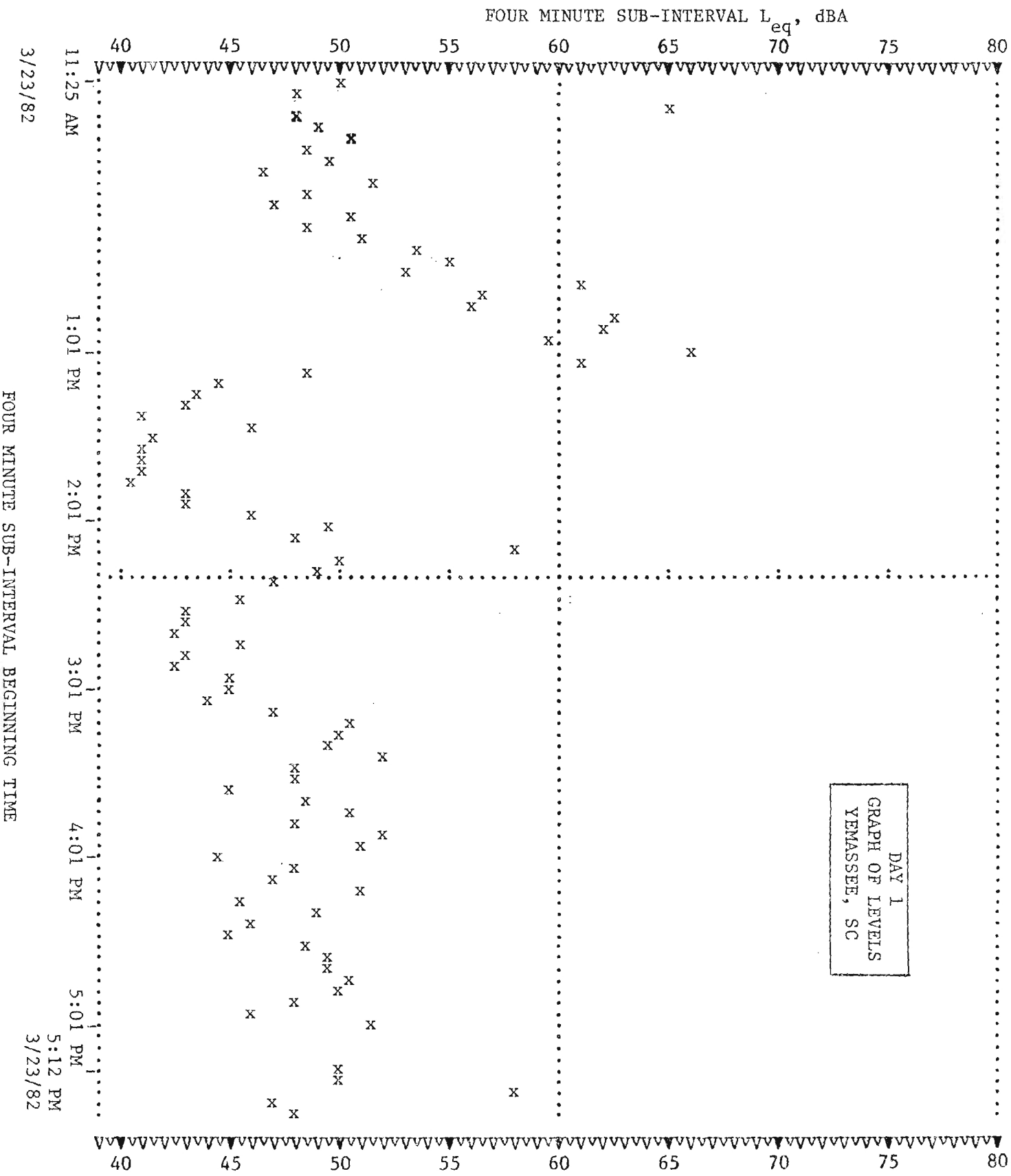
FLORENCE DIVISION — Continued

LINE SPEED CHART	Line Capacity (Lbs.) 4-Axle Cars	Unless Restricted By Engine, Equipment in Train, Special Instructions Or Train Order, Authorized Maximum Speed Of Trains in M.P.H. is:				Restricted speed (M.P.H.) as shown below for certain equipment									Locomotive Cranes
						Cars weighing				Engines in series			Wrecker Nos.		
		Psgr. trains handled by psgr.type engines	Piggy-back Trains	Unrestricted Trains 107, 109, 175, 176	Restricted Trains Are All Others	220,001 to 240,000 Lbs.	240,001 to 251,000 Lbs.	251,001 to 263,000 Lbs.	263,001 to 270,000 Lbs.	250-261, 300-392, 556-559, 700, 800, 900, 1000, 4600, 4700	500-555, 1300, 1400, 1500, 1600, 1700, 1800, 3200, 3400, 4000, 4200, 5100, 5500, 6000	1900, 2000, 2100, 7000, 8000, 8100	765250 765251 765252 771200 771201 771202 771203 771253 771254 771255 771256 771257 L & N 40022	765157 765160 L&N 40029 40030 Ga. 1901 A&WP 2 See Note A	765447 765449 765452 765454 765455 765458 765459 765460 765463 771929 771947 771948 771995 771997
DARLINGTON SUBDIVISION															
Florence to MP 308.0	270,000				40								25	25	25
MP 308.0 to Hartsville	270,000				30								25	25	25
LANE SUBDIVISION															
Sumter to Lane	270,000				30								25	25	25
EASTOVER SUBDIVISION															
Sumter to Columbia	270,000				49								35	35	25
Sims to Fort Jackson					15								10	10	10
CRESTON SUBDIVISION															
Creston to MP 374.6	270,000				40								25	25	25
MP 374.6 to Giant	270,000				30			25	20	25	20	20	15	15	20
ROBBINS SUBDIVISION															
Yemassee to MP 462.8	270,000				25								20	20	
MP 462.8 to Robbins	270,000				49								35	35	25
PORT ROYAL SUBDIVISION															
Yemassee to Coosaw	270,000				25							20	20	20	
Coosaw to Port Royal	270,000				25				20			20	20	20	20
Bridge MP 454.8 to 454.9	270,000				25										
ANDERSON SUBDIVISION															
Calhoun Falls to MP 539.3	270,000				25							BARRED	20	20	
MP 539.3 to MP 541.6	263,000				15				BARRED		BARRED	BARRED	10	7	
MP 541.6 to MP 546.0	263,000				25				BARRED		BARRED	BARRED	20	20	
MP 546.0 to MP 555.2	263,000				15				BARRED		BARRED	BARRED	10	7	
MP 555.2 to Andersen	263,000				25				BARRED		BARRED	BARRED	20	20	
GREENVILLE SUBDIVISION															
Laurens to MP 590.6 (Swamp Rabbit)	270,000				25								20	20	
MP 590.6 (Swamp Rabbit) to Greenville	263,000				15							BARRED	10	7	
Bridge MP 590.8 (Broad St.)	263,000				10		*	*	BARRED			BARRED	BARRED		
HARTSVILLE SUBDIVISION															
Hartsville to MP 329.0	263,000				25				BARRED		BARRED	BARRED	15	15	15
MP 329.0 to Ashwood	263,000				25	15	15	15	BARRED	15	BARRED	BARRED	15	15	15
CN&L RAILROAD															
Columbia to Laurens	270,000				49								35	35	25
Bridge MP 1.2					20		15	10	10				10	15	
Bridge MP 74.6					30	20	15	10	10			25	10	15	25
Bridge MP 74.7					30	20	15	10	10			25	10	15	25

*Any car having this gross weight shall be preceded and followed by one car having gross weight no greater than 180,000 lbs. each.

NOTE A - All wreckers of A&WP and Ga. railroads are restricted to 25 M.P.H.

1A


FOUR MINUTE SUB-INTERVAL L_{eq}, dBA
40
45
50
55
60
65
70
75
80
11:25 AM
3/23/82
1:01 PM
2:01 PM
3:01 PM
4:01 PM
5:01 PM
5:12 PM
3/23/82
FOUR MINUTE SUB-INTERVAL BEGINNING TIME
DAY 1
GRAPH OF LEVELS
YEMASSEE, SC

1B

DAY 1
GRAPH OF LEVELS
YEMASSEE, SC

FOUR MINUTE SUB-INTERVAL L_{eq}, dBA

40 45 50 55 60 65 70 75 80

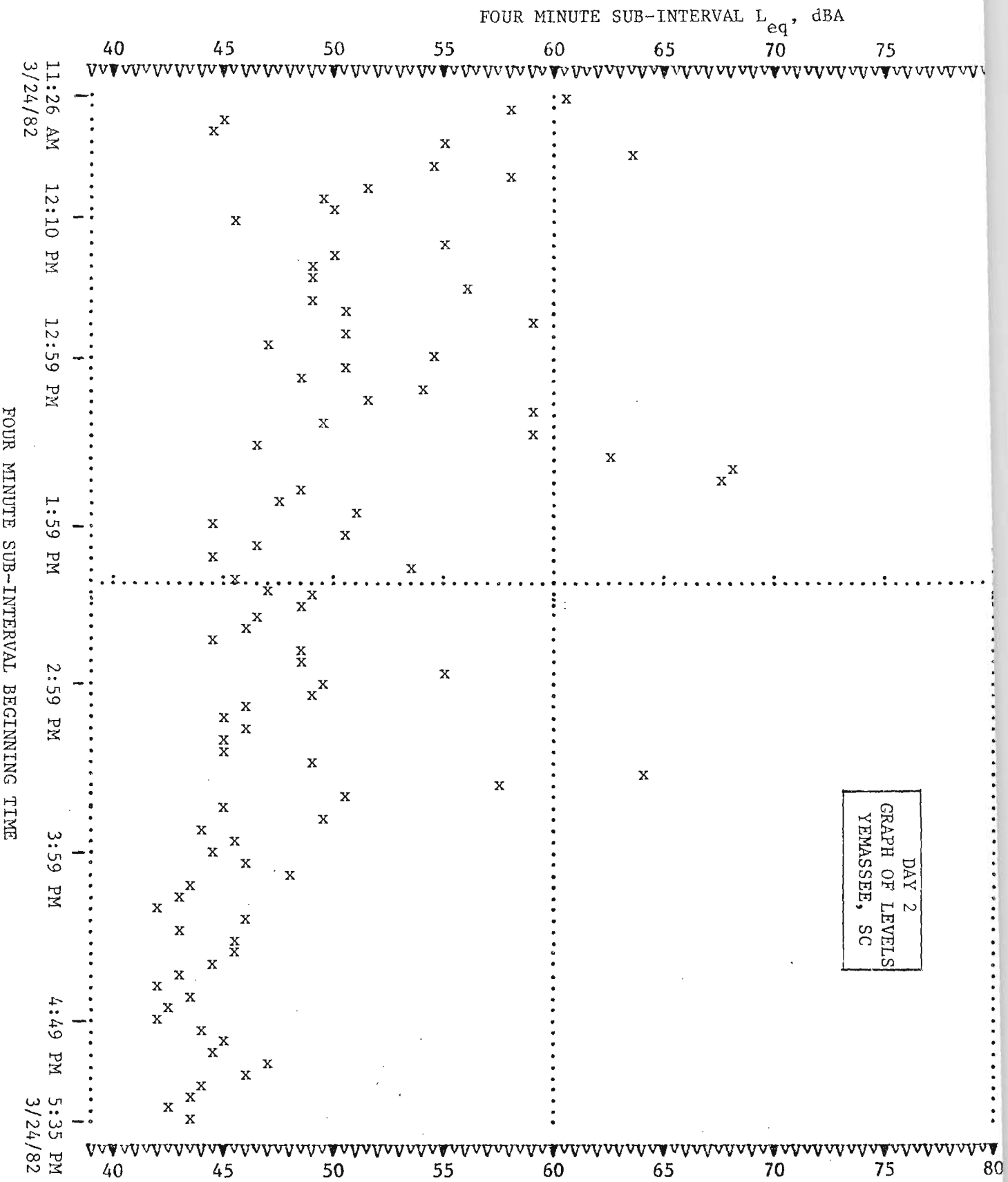
6:00 PM 7:00 PM 8:00 PM 9:00 PM 10:00 PM 11:00 PM

3/23/82 3/23/82

FOUR MINUTE SUB-INTERVAL BEGINNING TIME

DAY 1
GRAPH OF LEVELS
YEMASSEE, SC
FOUR MINUTE SUB-INTERVAL L_{eq}, dBA
40
45
50
55
60
65
70
75
80
11:40 PM
3/23/82
1:00 AM
3/24/82
2:00 AM
3:00 PM
4:00 AM
5:00 AM
5:40 AM
3/24/82
FOUR MINUTE SUB-INTERVAL BEGINNING TIME

DAY 1
GRAPH OF LEVELS
YEMASSEE, SC
FOUR MINUTE SUB-INTERVAL L_{eq}, dBA
80
75
70
65
60
55
50
45
40
6:00 AM
7:00 AM
7:44 AM
7:50 AM
8:58 AM
9:58 AM
10:58 AM
11:22 AM
3/24/82
3/24/82
FOUR MINUTE SUB-INTERVAL BEGINNING TIME


FOUR MINUTE SUB-INTERVAL L_{eq}, dBA
40
45
50
55
60
65
70
75
80
11:26 AM 3/24/82
12:10 PM
12:59 PM
1:59 PM
2:59 PM
3:59 PM
4:49 PM
5:35 PM 3/24/82
FOUR MINUTE SUB-INTERVAL BEGINNING TIME
DAY 2
GRAPH OF LEVELS
YEMASSEE, SC

2B

DAY 2
GRAPH OF LEVELS
YEMASSEE, SC

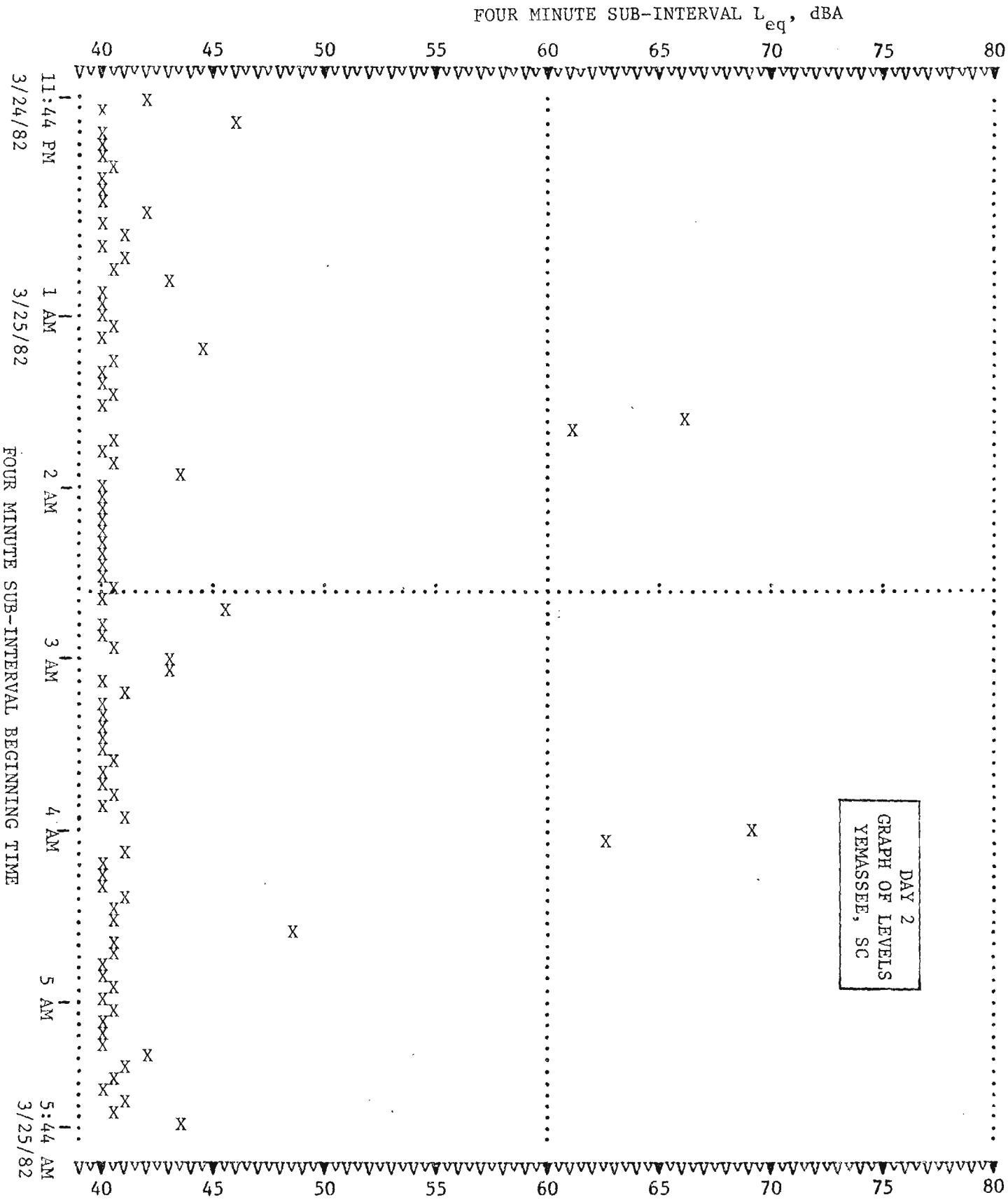
FOUR MINUTE SUB-INTERVAL, L_{eq}, dBA

40 45 50 55 60 65 70 75 80

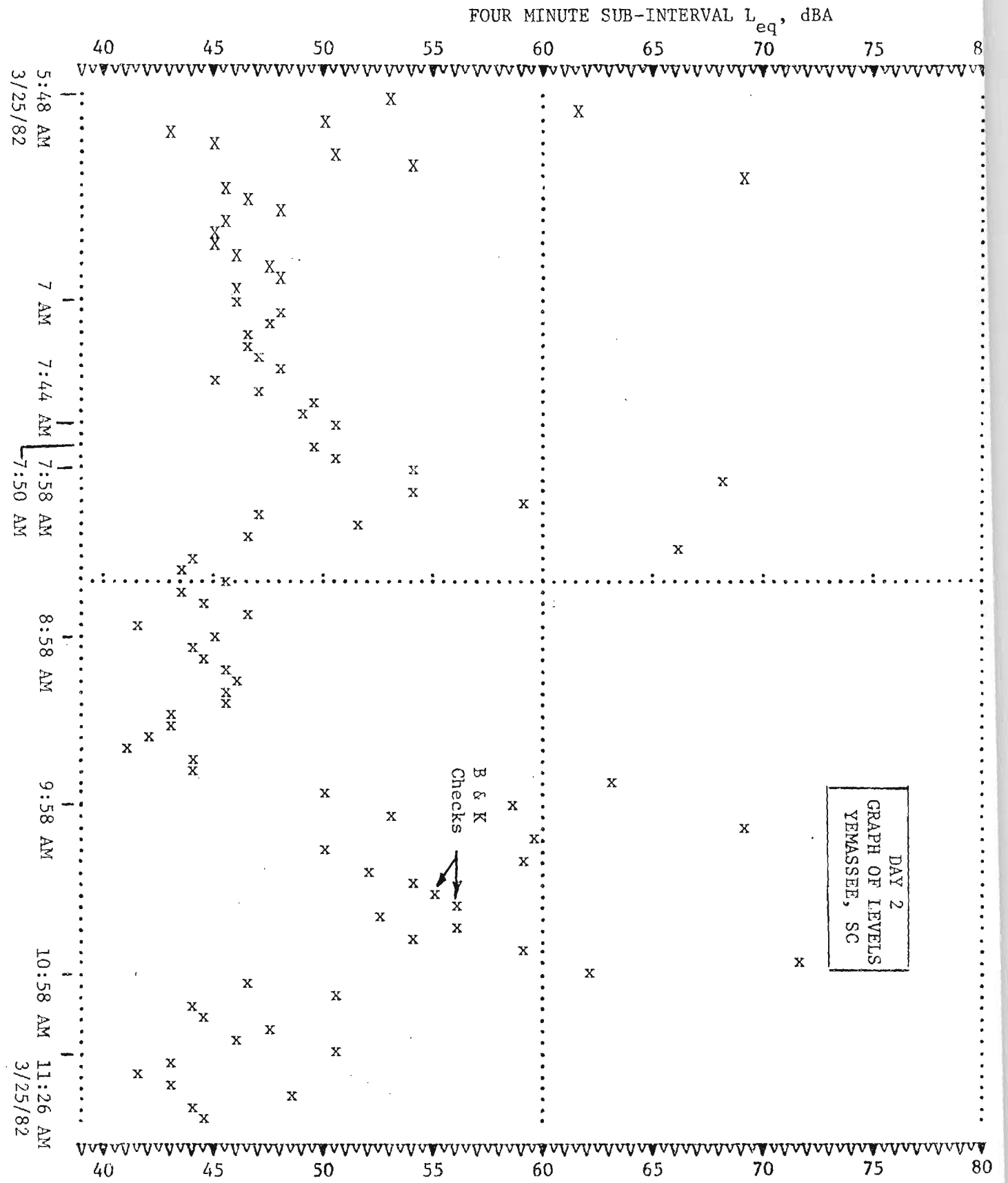
5:44 PM 3/24/82 | 6 PM | 7 PM | 8 PM | 9 PM | 10 PM | 11 PM | 11:40 PM 3/24/82

FOUR MINUTE SUB-INTERVAL BEGINNING TIME

2C


FOUR MINUTE SUB-INTERVAL L_{eq}, dBA
40
45
50
55
60
65
70
75
80
11:44 PM
3/24/82
1 AM
3/25/82
2 AM
3 AM
4 AM
5 AM
5:44 AM
3/25/82
FOUR MINUTE SUB-INTERVAL BEGINNING TIME
DAY 2
GRAPH OF LEVELS
YEMASSEE, SC

2D


FOUR MINUTE SUB-INTERVAL L_{eq}, dBA
40
45
50
55
60
65
70
75
80
FOUR MINUTE SUB-INTERVAL BEGINNING TIME
5:48 AM
3/25/82
7 AM
7:44 AM
7:58 AM
7:50 AM
8:58 AM
9:58 AM
10:58 AM
11:26 AM
3/25/82
B & K
Checks
DAY 2
GRAPH OF LEVELS
YEMASSEE, SC

COMMUNITY NOISE LEQ/LDN PROGRAM

FOR DAY 1

ENTER NUMBER OF OCCURENCE THEN LEVEL

8.
40.
5.
40.2
1.
40.6
1.
40.8
5.
41.
2.
41.2
2.
41.4
1.
41.6
1.
41.8
3.
42.
1.
42.4
2.
42.6
4.
42.8
4.
43.
5.
43.2
1.
43.4
2.
43.6
3.
43.8
2.
44.
2.
44.2
6.
44.4
4.
44.6
3.
44.8
4.
45.
3.
45.2
1

4.
45.4
3.
45.6
3.
46.
6.
46.2
1.
46.4
2.
46.6
2.
46.8
2.
47.
1.
47.2
1.
47.4
1.
47.6
3.
47.8
3.
48.
6.
48.2
8.
48.4
3.
48.6
1.
48.8
2.
49.
4.
49.2
4.
49.4
2.
49.6
4.
49.8
10.
50.
2.
50.2
3.
50.4
3.
50.6
1.
50.8
1.
51.
3.
51.2
2.
51.4
2

2.
51.6
3.
51.8
2.
52.
1.
52.2
1.
52.4
2.
52.6
3.
53.
2.
53.2
3.
53.4
3.
53.6
1.
53.8
1.
54.
1.
54.2
1.
54.4
1.
54.6
1.
54.8
1.
55.
3.
55.6
1.
56.
1.
56.4
1.
56.6
1.
57.
1.
57.4
1.
57.6
1.
57.8
3.
58.
1.
58.8
1.
59.2
1.
59.4
1.
59.6

3

3

4

1.
60.2
1.
60.8
1.
61.2
2.
61.8
1.
62.4
1.
62.8
1.
64.4
1.
65.
1.
66.
1.
66.2
1.
67.4
1.
68.

"DAY" HRS.
LEQ EQUALS
54.29429394

66.
40.
3.
40.2
9.
40.4
1.
40.6
6.
41.
6.
41.6
2.
43.
1.
43.2
1.
43.8
1.
44.
1.
44.2
4.
44.6
1.
45.6
1.
45.8
2.
46.

4

5

1.
46.2
1.
46.4
2.
46.8
1.
47.
1.
47.2
1.
47.6
2.
48.6
1.
49.6
2.
50.2
2.
50.8
1.
52.2
1.
53.2
1.
56.6
1.
60.
1.
60.8
1.
64.8
1.
66.
1.
67.
1.
67.2
1.
68.2
1.
68.6
1.
69.
1.
69.4
1.
71.
1.
71.2
1.
71.8

"NIGHT" HRS, INCLUDING 10 dBA
LEQ EQUALS
68.43271502

DAY 1 LDN

DAY ONE
TOTAL TIME
LEQ EQUALS
64.4435449

5

COMMUNITY NOISE LEQ-LDN PROGRAM

COMPUTER DATA TAPE COPIES
YEMASSEE, SC
PAGE 3 OF 4

ENTER NUMBER OF OCCURENCE THEN LEVEL

FOR DAY 2

1 2 3

1	2	3
1.	8.	3.
40.2	46.	54.
7.	2.	1.
40.4	46.2	54.2
1.	4.	2.
40.6	46.4	54.4
2.	4.	2.
41.	46.6	54.8
4.	2.	1.
41.2	47.	55.
1.	5.	1.
41.6	47.2	55.2
6.	3.	1.
41.8	47.4	55.6
1.	1.	1.
42.	47.6	55.8
4.	2.	2.
42.2	48.	56.
1.	1.	1.
42.4	48.2	57.4
3.	4.	1.
42.6	48.4	57.6
3.	2.	2.
42.8	48.6	58.
6.	2.	1.
43.	48.8	58.6
5.	4.	1.
43.2	49.	58.8
3.	1.	4.
43.4	49.2	59.
3.	3.	2.
43.6	49.4	59.2
2.	3.	1.
43.8	49.6	59.6
7.	3.	1.
44.	49.8	60.4
2.	3.	1.
44.2	50.	61.4
8.	1.	1.
44.4	50.2	61.6
5.	2.	1.
44.6	50.4	62.
3.	7.	2.
44.8	50.6	62.2
7.	1.	1.
45.	51.	62.6
8.	2.	1.
45.4	51.4	63.2
4.	1.	1.
45.6	51.6	63.8
1.	1.	1.
45.8	51.8	64.2
1	1.	1.
	52.	64.4
	1.	1.
	52.4	65.8
	1.	1.
	52.6	66.
	1.	1.
	53.2	66.4
	1.	2.
	53.6	67.6
	1.	2.
	53.8	3
	2.	

4

1.
68.2
1.
69.2
1.
70.8
1.
71.4

"DAY" HRS.

LEQ EQUALS
57.28206541

47.
40.
7.
40.2
4.
40.4
22.
40.6
11.
41.2
4.
41.8
1.
42.2
2.
42.2
4.
42.8
4.
43.2
2.
43.6
1.
44.2
1.
44.6
1.
44.8
3.
45.
1.
45.4
2.
45.6
3.
46.
1.
46.6
1.
47.4
1.
48.
1.
48.2
1.
48.6
1.
50.

4

5

1.
50.6
1.
53.2
1.
54.
1.
61.2
1.
61.6
1.
62.4
1.
65.8

"NIGHT" HRS, INCLUDING 10 dBA

2.
69.

LEQ EQUALS
62.99011332

5

DAY 2 LDN

DAY TWO
TOTAL TIME
LEQ EQUALS
60.3373876

TOTAL TIME
LEQ/LDN
EQUALS
62.85868489

DAY 1 & 2 COMBINATION, SEE REPORT TEXT.

5